NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

New Jersey Draft Global Warming Response Act Recommendation Report
January 22, 2009 Stakeholder Meeting – Industry, EGUs, Waste and Water
Summary of discussion and written comments

FOCUS QUESTIONS

Industry

1. What is the right mechanism for regulation? Cap-and- trade? performance standards? Best Management Practices (in cooperation with BPU)? Compliance/technical assistance? Some combination?

2. What needs to be considered when applying these regulatory mechanisms to the various industry sectors?

3. How do we maximize the environmental gains achieved through these regulatory mechanisms, while minimizing the economic impacts to industry?

Electric Generating Units

4. Is it appropriate to have a cap-and-trade approach for existing EGUs and a performance standard for new EGUs?

5. What is the most effective approach to establishing performance standard for new EGUs? Minimum efficiency? Maximum heat rate? Should the standards be fuel specific or fuel neutral? Should standards be different for different size units? Should standards be based on currently commercially available technology or be technology forcing?

6. For existing EGUs, are additional regulatory approaches needed to compliment a cap-and-trade system?

7. Should requirements be set, with what deadline, to promote the implementation of carbon capture and sequestration?

Waste

8. With respect to the inorganic waste stream, the draft report sets a long term goal of zero waste by 2050. What policies and/or mechanisms need to be put in place over the next two years to accomplish this goal? Legislation? Regulations? Fees/taxes (e.g., point of purchase tax)? Incentives (e.g., for product and packaging manufacturers)?

9. With respect to the organic waste stream, what policies and/or mechanisms need to be put in place over the next two years to accomplish this goal? Legislation? Regulations? Fees/taxes? Incentives?

10. For the organic portion of the waste stream, what are the most promising technologies, from a lifecycle assessment, (e.g., composting, digestion, fuel production, disposal with energy recovery)? Can you share models/examples where these technologies are being implemented successfully?

11. What are the most promising technologies, from a lifecycle assessment, that offer an alternative to landfills or incineration? Gasification? Plasma gasification? Pyrolysis? Others?

12. For those most promising technologies, what policies and/or mechanisms need to be put in place over the next two years to accomplish this goal? Legislation? Regulations? Fees/taxes (e.g., point of purchase tax)? Incentives (e.g., for product and packaging manufacturers)?

13. In addressing the waste that does end up in landfills,
    - What is the appropriate amount of landfill gas emissions for which energy recovery should be mandatory?
    - Are the current requirements for air pollution control of landfill gases, if volatile organic substance emissions exceed 3.5 lbs/hr, sufficient? Should there be a separate cutpoint and standard for methane emissions?
    - Should requirements for the capture of landfill gases be strengthened? How?
    - Since the state cannot dictate where waste goes, as this is a commerce issue, each county determines their waste streams to some degree. Therefore, for any waste to energy facility, how can the State identify the waste source and determine that it's a suitable energy source?

Water

14. What are your thoughts with respect to the recommendation included in the draft report?

15. What are your thoughts with respect to including additional recommendations, such as:
    - incentive-based measures (i.e., interest-free funding assistance, loans, appliance/fixture rebates, etc.)
    - innovative water rate structures be useful as a means of influencing user behavior (i.e., decreasing water waste)
    - measures to increase irrigation efficiency and/or limit outdoor water waste?
    - Measures to minimize unnecessary or excessive water transfers (i.e., pumping water for storage and transfer between water systems)

SUMMARY OF DISCUSSION AND WRITTEN COMMENTS

INDUSTRY

- The six-month deadline is unreasonable. (It has taken six months for the supermarket industry to identify best management practices and match them with appropriate incentives.) Eighteen months is more reasonable.
- Expand the stakeholder process; involve more agencies, allow for more dialogue.
- Direct more incentive funding toward the commercial/industrial sector.
- The environmental justice community supports performance standards.
- Lobby the Regional Greenhouse Gas Initiative to include more industries in order to level the playing field for NJ industries.
- Mirror the direction that the federal government is going in order to avoid 50 different state rules. Provide flexibility to take into account any changes in federal policy that may occur under the new administration.
- Take into account early action; some industries and companies have significantly reduced their emissions since 1990. Is there a mechanism to recognize measures that have already been taken? Performance standards recognize early action.
- The half-life of refinery equipment is 15-20 years, so change won't come quickly.
- Model the CO2 requirement approach after that of the particulate approach (i.e. allow for an Option A or Option B).
- Further regulatory requirements should not be imposed upon the State's industries. Rather, as an alternative to the imposition of further regulation and additional financial burdens on the economically challenged industrial community, we urge the state to provide additional incentives, financial and otherwise, to provide further encouragement to the industrial sector's ongoing and proven energy efficiency and GHG reduction activities. The New Jersey business community already pays among the highest energy rates in the country, which are increased by the significant costs associated with the various Clean Energy Programs and RGGI compliance costs, among others.
- Additional funding could be made available from the Economic Development Authority, proceeds from the RGGI auctions, the Clean Energy programs, and the economic stimulus programs adopted by the state and federal governments, among others. We have also long advocated that commercial and industrial companies be encouraged to self-invest in their unique energy efficiency programs by receiving a partial exemption from payment of the Societal Benefits Charge.
- For NJ companies that have facilities in other states, their New Jersey facilities have consistently been the most expensive in their companies' portfolios, which explains why, over time, numerous NJLEUC members have scaled back or eliminated entirely their New Jersey presence, leading to the loss of jobs and economic benefits to the communities that house them. Adding new costs and regulatory obligations will only exacerbate this trend. This should not be the way the state reduces energy demand and GHG emissions.

- Due to the success of energy efficiency efforts in the commercial and industrial sector accomplished by BPU's Clean Energy Program, future programs should continue to focus on industrial energy efficiency and GHG emissions reductions.

EGUs

- Cap-and-trade doesn't guarantee reductions of HAPs in urban areas. Performance standards are more effective at addressing this issue.
- In new performance standards, we should address PM2.5, NOx, & SOx, not just CO2. Public health should be the 2nd highest criterion.
- Look at the ways in which EPA picked technologies and set standards in the 1970s during the development of the Clean Air Act. (new source performance standards, SIPs, etc.)
- Cap-and-trade is better than performance standards. Better at moderating the effects on wholesale electricity markets and prices. Cap-and-trade allows for flexibility at the facility level.
- Cap-and-trade need to be consistent with what EPA does in these areas.
- Pay attention to consistency among State policies. Don't implement policies aimed at CO2 reduction at the expense of other environmental goals.
- Pay attention to potential conflicts between the State's CO2 goals and its economic development goals. Examine the impact on energy pricing, capacity, transmission lines, export of industries/jobs out of the State. We risk pricing NJ out of the EGU market, which would create a leakage problem.
- Regulations should be fuel-specific.
- RGGI creates incentives for all fossil-fired electric generation – new and existing, regardless of fuel used – to maximize efficiency. The original RGGI modeling anticipated and incorporated both new and existing units. To the extent that existing generating resources cannot improve their efficiency and environmental profiles and remain competitive, those resources will retire and make way for newer, more efficient generation. That was the goal of RGGI as designed, and that's the way it should work. And it should be given the opportunity to work without the imposition of new, additional standards.
- EGU sector believes the State should not impose CO2 performance standards on new EGUs. The RGGI cap and trade program is sufficient to reduce emission from existing and new sources and sends a price signal to all generation to be carbon efficient in order to limit its cost obligations. Any additional standards are excessive and burdensome. The imposition of additional standards would create disincentives to developing new generation (and retaining existing generation) in New Jersey. RGGI and the other programs must be given time to work.
- Unreasonable standards have the potential to shift generation development to states to the west of New Jersey – an unintended consequence that does not support New Jersey's goal to reduce GHG emissions and increase reliance on in-state power production.
- Any standards should be based on a reasonable assessment of new technology. It is critical that these standards be technically and commercially attainable.

- Establishing criteria for the investment of RGGI revenue to build new, state of the art, high efficiency electric generation is admirable, although unnecessary. In fact, they may be counterproductive. Providing additional "out of market" advantages can inappropriately disrupt the efficient operation of the competitive power markets, and should be discouraged.
- The definition of "reconstructed" must be established in clear language that is understood by all parties.
- The environmental community supports support a moratorium on new coal fired power plants and urges the State to develop specific plans to either phase out existing coal plants or ensure that their emissions do not exceed those of an efficient combined-cycle natural gas plant
- Carbon capture and sequestration for power plants is an unproven technology and should only be considered if sound, independent research can prove unequivocally that carbon can be stored safely, cost-effectively, and indefinitely.
- Consider the use of revenue from the auction of RGGI allowances for investment in CCS technologies. Investment approach is far preferable to a regulatory approach

WASTE

NOTE: The summary of comments related to methane reflect comments received at both this Stakeholder Meeting and the January 16, 2009 Stakeholder Meeting on Non-CO2 Highly Warming Gases.

Waste-to-energy

- The Energy Master Plan increases the Renewable Portfolio Standard for Class II renewables.
- VOCs from landfills should be viewed as a low-Btu fuel, not as waste. The latter viewpoint exposes landfills to burdensome regulations that interfere with waste-to-energy projects at landfills.
- NYC did an exhaustive survey/screening process around 2005 to identify promising waste-to-energy technologies.
- Methane is both a threat and an opportunity. Methane capture from non-industrial sources is a good fuel opportunity. It is the cleanest-burning fossil fuel we have; the use of methane as a fuel source offsets the use of more carbon-intensive fossil fuels.

Organic waste issues

- Do demonstration projects to take food and other organic waste out of the waste stream.
- Demonstration projects need to be expanded and given more emphasis and more financial support.
- Odors are a big issue for food recycling/trash to energy facilities, but the best plants manage this quite well.

- It is better to intercept organic waste before it gets to the landfill because of the resulting methane avoidance. It is also more cost-effective.

Emerging waste-related industries

- Support the emergence of a new waste-to- fertilizer industry and a new waste-to-energy in NJ. There is a NJ company processing 250 tons of organic waste per day, converting it to fertilizer and selling it.
- New industries are amenable to incentives; existing industries are amenable to regulation. Incentives can tip the business case for waste-related technologies and businesses.
- Question: Tipping fees at waste-to-energy facilities are much less than the prevailing tipping fees at landfills. Why don't we see more of the former emerging? Answer:
    - Feedstock. Waste-to-energy facilities require a stream of acceptable materials. NJ waste isn't separated; it is impossible to finance waste-to-energy facilities without a separate waste stream for the combustible component of waste. We have no legislative or regulatory mechanism to make it happen. Other states do. (MA, OH, CA, OR)
    - Collection and delivery costs. Waste is dispersed. There are costs associated with truck fleets, garbage cans, labor.
- There are ways to address the economics of collection. In a "wasteshed", a single hauler takes all the waste from a defined region to a single waste facility.
- Create a working group on organic waste. Get haulers, producers and industry in the same room.
- There an existing public-private partnership of municipalities and industry to support an anaerobic digester project. The municipalities provide funding, regulatory support (case managers, general permits) and help the industry partners navigate the regulatory hurdles

Methane – Global warming potential and time horizon

- Our accounting method understates the importance of controlling methane. Methane has a 12-year atmospheric lifetime; its GWP of methane is 25x over a 100 year time horizon, but 72x over a 20 year time horizon. A time horizon of 100 years only makes sense if you're looking to reduce emissions/effects over 100 years. GHG policies are affected by the time horizon: we have a legal horizon of 2020 and 2050, so we should look at GWP over those timeframes, not a 100 year timeframe.
- *NJDEP response: The 100 year timeline allows us to be consistent with everyone else's reporting and accounting standards. It is a compromise that aims to balance short-lived species with long-lived species. This is an inventory issue; if we change the timeline for methane, we would have to change the timelines for longer-lived gases as well.*

Methane – control/avoidance/reduction

- See **Organic Waste Issues** above.
- Landfills are the largest source of methane in the U.S.

- Research from Europe shows that a tight cap on landfills and venting eliminates 99% of methane release. However, most methane emissions are released from active landfills *before* they is capped. At active landfills, recovery is only 30%. Venting plus a daily cap = 60%. Permanent cap = 95%. This is a huge opportunity for emissions reductions.
- Increase the focus on food and organic waste in order to reduce methane production. Preventing methane from being generated in the first place is much better than burning it; recycling and reuse are more energy efficient than waste-to-energy.
- Methane reduction is very doable.
- Use market-based incentives for methane reduction. Offsets from avoided methane technologies and practices can pay for the processes.
- Handling landfill methane better gives a much bigger reduction in radiative forcing than fuel displacement at EGUs.
- NJDEP recycling programs should address food waste.

Other issues

- Rethink NJ's single-stream recycling system. Too much material ends up in landfills. Don't comingle in the first place.
- Provide tax incentives to waste generators for diverting waste away from landfills.
- A trash tax exists; it was passed last year. An additional tax on waste would be very troubling to the New Jersey Business and Industry Association. It is essential to look at the potential economic impacts of such a measure.
- Bottle bills are cumbersome for distributors and retailers, and creates a competing market.
- Put the incentives in place before the regulations—no sense requiring things that people can't build for technological or financial reasons.
- The recommendation to measure waste generated in-state, not just the waste landfilled here, is a good one.
- The lifecycle analysis approach that we are taking is a good one.
- The supermarket industry has been a frontrunner in the issue of recycling food waste. They should receive recognition for what they've done and encouragement to do more.

Policy models, tools, and resources

- The EU offers a possible model on waste management.
- UNFCCC web site has good resources. They have reports that document the pros and cons of various waste management technologies under CDM and JI.
- AM00025 deals with offsets for avoided methane technologies.
- EPA's "Decision Support Tool" is a lifecycle analysis tool.
- EPA's WARM model can estimate GHG reductions for various waste management practices.
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Education

- We need education—trash is under individual control. Kids get recycling quickly.
- Education about the 72x GWP of methane will show why individuals can have a big impact on global warming.

WATER

- Good soil management practices decrease water use. Adding organic waste to soil reduces the need for irrigation.
- Education is needed in order to highlight individuals' impact on water use. The compact fluorescent light bulb education campaign is instructive.
- Wastewater is a resource, but the NJ regulatory structure discourages wastewater reuse.
- Develop best management practices for stormwater practices.
- Create innovative rate structures to incentivize wise water use. Example: stormwater rates could drive best management practices; property owners' sewer rates could be adjusted adjusted to reflect the percentage of impervious surface on their properties, rainwater harvesting etc. (New York City, Philadelphia, Seattle, Portland).
- Water efficiency measures have zero net cost.
- One model might be to create stormwater authorities based on the model of sewer authorities.
- The Ocean County Conservation District has a project with NRCS involving recharge, detention basins, soil preservation.